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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/873,755	06/04/2001	Maurice Clarence Kemp	MORN-0010 (108347.00021)	2361
25555	7590	03/25/2004	EXAMINER	
JACKSON WALKER LLP 2435 NORTH CENTRAL EXPRESSWAY SUITE 600 RICHARDSON, TX 75080			CHOI, FRANK I	
			ART UNIT	PAPER NUMBER
			1616	

DATE MAILED: 03/25/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/873,755

Applicant(s)

KEMP ET AL.

Examiner

Frank I Choi

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-25,27-59 and 65-102 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-25,27-59 and 65-102 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 1/22/2004 has been entered.

Specification

The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1, 3-25, 27-59, 65-102 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for the disclosed processes using inorganic salts of phosphoric acid, sulfuric acid and calcium calcium oxide, calcium hydroxide, calcium carbonate and/or calcium sulfate to prepare "AGIIS" and additive which enhances the activity of the acidic composition selected from alcohols, organic acids, periodic acid or surfactants does not reasonably provide enablement for other alts of phosphoric acid, "AGIIS" where the above components and processes are not setforth or other additives. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention commensurate in scope with these claims.

The nature of the invention:

Applicant claims a combination of phosphate salts and an acidic sparingly soluble Group IIA complex with dependent claims adding an additive.

The state of the prior art and the predictability or lack thereof in the art:

The prior art of record does not appear to disclose much more than what Applicant has enabled, as such, predictability as to other types of phosphoric acid salts, AGIIS salts and additives appears to be low.

The amount of direction or guidance present and the presence or absence of working examples:

Applicant further indicates that normally mineral acids of low pH, such as HCl, are irritating to the skin. Applicant further indicates that the AGIIS of the invention having the same normality as saturated calcium sulfate in sulfuric acid but does not char sucrose as readily, has low volatility at room temperature and pressure, and is less corrosive to human skin. Nevertheless, an embodiment of the AGIIS contains saturated calcium and sulfate. As such, it appears that the comparison product contains the same components but acts differently. However, relatively few examples of components are disclosed by the Specification and relatively few methods of preparing the AGIIS using a few of said components are disclosed. As such, it appears that the process by which the AGIIS is made is critical obtaining the results as indicated above.

The breadth of the claims and the quantity of experimentation needed:

The claims are broad in that the claim any phosphoric acid salt, any calcium salt and any additive. Further, since relatively few components are disclosed, it appears that one of ordinary skill in the art would be required to do undue experimentation in order to determine which

components other than the components disclosed could be used in combination with each other or with the disclosed components and processes of preparation to arrive the AGIIS solution having said properties, suitable phosphoric acid salts and additives which enhance the effectiveness of the composition.

Examiner has duly considered Applicant's arguments but deems them unpersuasive.

Applicant argues that it has provided numerous examples of the claimed components. However, only inorganic salts of phosphoric acid are disclosed and even fewer inorganic calcium salts are disclosed. Also, the additive is supposed to enhance the effectiveness of the composition. However, Applicant only mentions, alcohols, organic acid periodic acid and surfactants.

Claims 1, 3-25, 27-59,65-102 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Applicant has amended the claims to include a mole ratio of calcium hydroxide to sulfuric acid of less than about 0.5. However, the only mole ratios cited by Applicant were 0.45-1, 0.44-1 and 0.31. The limitation "less than about 0.5" clearly includes mole ratios which appear to be outside the scope of the written description. See *In re Wertheim*, 191 USPQ 90,97 (CCPA 1976) (holding that claim language which recited "at least 35%" was not supported by the written disclosure as it read literally on embodiments outside the disclosed range of 25-60%).

The following is a quotation of the second paragraph of 35 U.S.C. 112:

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The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1, 3-25, 27-59,65-102 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Applicant claims that the AGIIS is isolated from a mixture comprising sulfuric acid and calcium hydroxide, or a calcium salt, or a mixture of the two. However, the claim also claims that AGIIS is in-situ generated which appears to mean that sulfuric acid and calcium hydroxide, or a calcium salt, or a mixture of the two are added with the salt of phosphoric acid and the AGIIS is produced. As such, it is uncertain how the AGIIS can be isolated if it is generated in-situ in the composition.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1,3-15,17-25,27-38,40-59,65,67-79,81-102 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schwank (US Pat. 5,087,467) in view of Roden et al. (US Pat. 6,375,976) and Wurzbarger et al. (US Pat. 6,331,514).

Schwank discloses produce which has been immersed in an aqueous solution having a pH of less than 2, containing inorganic salts of phosphoric acid and inorganic acids, such as, hydrochloric, phosphoric and sulfuric acid (Claims 1,2,4,10).

Roden et al. disclose that the combination of organic GRAS acids, having a dissociation constant of from about 10^{-1} to 10^{-5} , having a chelating capability of a least twice of the first and second GRAS acids, such as ascorbic, citric, lactic, malic and tartaric, with said first GRAS acid which is an inorganic acid, such as hydrochloric acid, which dissociates nearly to completion in water and with said second GRAS acid which is an inorganic acid less strong than the first GRAS acid and having a dissociation constant of less than about 10^{-1} , such as phosphoric acid, wherein the composition has antimicrobial activity (See entire reference, especially claims).

Wurzbarger et al. disclose the preparation of a disinfecting solution by combining a metal hydroxide or metal oxide, such as calcium, with an acid, such as sulfuric acid, and filtering out any precipitants, which resultant composition is effective in disinfecting meat, vegetables and fruit (See entire document).

The difference between the prior art and the claimed invention is that the prior art does not expressly disclose compositions, nutriment and methods of reducing biological contaminants with combination of AGIIS and salt of phosphoric acid having a pH of less than 2. However, the prior art amply suggests the same as solutions for application to food substances containing acids and salts of phosphoric acid are known in the art. As such, it would have been well within the skill of and one of ordinary skill in the art would have been motivated to modify the prior art as above with the expectation of producing a composition which is effective in both disinfecting and reducing discoloration of food products.

Examiner had duly considered Applicant's arguments but deems them unpersuasive.

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*,

231 USPQ 375 (Fed. Cir. 1986). Further, the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981).

Applicant argues that Schwank nor Roden disclose Applicant's invention because neither Schwank nor Roden disclose AGIIS which is isolated from a mixture comprising sulfuric acid and calcium hydroxide or calcium salt or a mixture of calcium hydroxide and a calcium salt. However, Applicant claims also appear to include within in scope process in which sulfuric acid and calcium hydroxide or calcium oxide are added to the composition. Applicant admits that the exact composition of AGIIS is unknown (Response (11/28/2003), pg. 16). Since AGIIS is claimed as being prepared from a mixture of specified components and said components can be mixed in-situ to generate AGIIS, the prior art appears to meet the limitations of the claim as the prior art discloses the mixture of said components. Furthermore, Wurzburger does disclose the filtering out of precipitants, as such, said disclosure appear to meet the limitation requiring isolation of AGIIS.

Applicant argues that Wurzburg does not disclose a mole ratio of calcium hydroxide to sulfuric acid of less than about 0.5. However, Applicant does not define the scope of the limitation "about". As such, Applicant has made no showing that the limitation "about 0.5" exclude equimolar amounts of calcium hydroxide and sulfuric acid. Also, Wurzburg discloses the use of calcium oxide or calcium hydride instead of calcium hydroxide. There is no molar ratio limitation with respect to these calcium salts. As such, said limitation does not appear to overcome the prior art.

Therefore, the claimed invention, as a whole, would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made, because every element of the invention has been collectively taught by the combined teachings of the references.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1,3-15,17-25,27-38,40-59,65,67-79,81-102 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-13,39-41,79 of U.S. Patent Application Serial No. 09/500,473 or claims 19,38,51-56 of U.S. Patent Application Serial No. 09/655,131, each in view of Schwank (US Pat. 5,087,467), Roden et al. (US Pat. 6,375,976) and Wurzbürger et al. (US Pat. 6,331,514).

Said US Applications disclose in said claims compositions containing calcium salt, such as calcium sulfate or calcium hydroxide, and sulfuric acid.

Schwank (US Pat. 5,087,467), Roden et al. (US Pat. 6,375,976) and Wurzbürger et al. (US Pat. 6,331,514) are cited for the same reasons as above and are incorporated herein to avoid repetition.

The difference between the claims of said US Applications and the claims of the present invention is that the claims of said US Applications do not include a salt of phosphorous. However, the prior art amply suggests the same as it disclosed to use salts of phosphorus for treatment of produce. Further, the prior art discloses the use of calcium salts and sulfuric acid for treatment of produce. As such, it would have been well within the skill of and one ordinary skill in the art would have been motivated to modify the claims of said US applications with the expectation that the combination would be suitable for treatment of produce.

Therefore, the claimed invention, as a whole, would have been an obvious modification of the claims of said US Patent Applications to one of ordinary skill in the art at the time the invention was made, because every element of the invention has been collectively taught by the combined teachings of the claims of said Applications and the prior art references.

This is a provisional obviousness-type double patenting rejection.

Claims 1,3-15,17-25,27-38,40-59,65,67-79,81-102 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 21 of US Pat. 6,572,908 in view of Schwank (US Pat. 5,087,467), Roden et al. (US Pat. 6,375,976) and Wurzburger et al. (US Pat. 6,331,514).

Said US Patent claims a nutriment which is treated with a composition containing calcium salt, such as calcium sulfate or calcium hydroxide, and sulfuric acid.

Schwank (US Pat. 5,087,467), Roden et al. (US Pat. 6,375,976) and Wurzburger et al. (US Pat. 6,331,514) are cited for the same reasons as above and are incorporated herein to avoid repetition.

The difference between the claim of said US Patent and the claims of the present invention is that the claim of said US Patent does not include a salt of phosphorous. However,

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the prior art amply suggests the same as it disclosed to use salts of phosphorus for treatment of produce. Further, the prior art discloses the use of calcium salts and sulfuric acid for treatment of produce. As such, it would have been well within the skill of and one ordinary skill in the art would have been motivated to modify the claim of said US Patent with the expectation that the combination would be suitable for treatment of produce.

Therefore, the claimed invention, as a whole, would have been an obvious modification of the claims of said US Patent to one of ordinary skill in the art at the time the invention was made, because every element of the invention has been collectively taught by the combined teachings of the claims of said Applications and the prior art references.

Conclusion

A facsimile center has been established in Technology Center 1600. The hours of operation are Monday through Friday, 8:45 AM to 4:45 PM. The telecopier number for accessing the facsimile machine is (703) 872-9306.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Frank Choi whose telephone number is (571)272-0610. Examiner maintains a flexible schedule. However, Examiner may generally be reached Monday-Friday, 8:00 am – 5:30 pm (EST), except the first Friday of the each biweek which is Examiner's normally scheduled day off.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's Supervisor, Mr. Thurman Page, can be reached at (571)272-0602. Additionally, Technology Center 1600's Receptionist and Customer Service can be reached at (571) 272-1600.

FIC

March 21, 2004



JOHN PAK
PRIMARY EXAMINER
GROUP 1600